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RAW SEQUENCE LISTING

DATE: 07/24/2002 34

PATENT APPLICATION: US/09/964,992A

TIME: 14:33:57

Input Set : A:\Uco-1245.app

Output Set: N:\CRF3\07242002\I964992A.raw

3 <110> APPLICANT: Saltveit, Mikal E.
 4 Campos, Reinaldo
 5 Nonogaki, Hiroyuki
 6 Suslow, Trevor
 7 The Regents of the University of California
 9 <120> TITLE OF INVENTION: Characterization of Phenylalanine Ammonia-Lyase (PAL)
 10 Gene in Wounded Lettuce Tissue
 12 <130> FILE REFERENCE: 023070-124500US
 14 <140> CURRENT APPLICATION NUMBER: US 09/964,992A
 C--> 15 <141> CURRENT FILING DATE: 2002-07-09
 17 <150> PRIOR APPLICATION NUMBER: US 60/235,956
 18 <151> PRIOR FILING DATE: 2000-09-26
 20 <160> NUMBER OF SEQ ID NOS: 13
 22 <170> SOFTWARE: PatentIn Ver. 2.1
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 26 <212> TYPE: PRT
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 40 His Leu Asp Glu Val Lys Lys Met Val Ala Glu Phe Arg Lys Pro Val
 41 35 40 45
 43 Val Lys Leu Gly Gly Glu Thr Leu Thr Val Ser Gln Val Ala Gly Ile
 44 50 55 60
 46 Ala Ala Ala Asn Asp Ser Asp Thr Val Lys Val Glu Leu Ser Glu Ala
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 49 Ala Arg Ala Gly Val Lys Ala Ser Ser Asp Trp Val Met Glu Ser Met
 50 85 90 95
 52 Asn Lys Gly Thr Asp Ser Tyr Gly Val Thr Thr Gly Phe Gly Ala Thr
 53 100 105 110
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 56 115 120 125
 58 Arg Phe Leu Asn Ala Gly Ile Phe Gly Asn Gly Thr Glu Thr Ser His
 59 130 135 140
 61 Thr Leu Pro His Ser Ala Thr Arg Ala Ala Met Ile Val Arg Ile Asn
 62 145 150 155 160
 64 Thr Leu Leu Gln Gly Tyr Ser Gly Ile Arg Phe Glu Ile Leu Glu Ala

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73 Gly Leu Leu Thr Gly Arg Pro Asn Ser Lys Ala Val Gly Pro Thr Gly
74          210          215          220
76 Glu Val Leu Asn Ala Glu Lys Ala Phe Ala Ala Gly Val Glu Gly
77 225          230          235          240
79 Gly Phe Phe Glu Leu Gln Pro Lys Glu Gly Leu Ala Leu Val Asn Gly
80          245          250          255
82 Thr Ala Val Gly Ser Gly Met Ala Ser Met Val Leu Phe Asp Ala Asn
83          260          265          270
85 Val Leu Ala Leu Leu Ser Glu Val Leu Ser Ala Ile Phe Ala Glu Val
86          275          280          285
88 Met Gln Gly Lys Pro Glu Phe Thr Asp His Leu Thr His Lys Leu Lys
89          290          295          300
91 His His Pro Gly Gln Ile Glu Ala Ala Ala Ile Met Glu Tyr Ile Leu
92 305          310          315          320
94 Asp Gly Ser Asp Tyr Val Lys Ala Ala Gln Lys Val His Glu Met Asp
95          325          330          335
97 Pro Leu Gln Lys Pro Lys Gln Asp Arg Tyr Ala Leu Arg Thr Ser Pro
98          340          345          350
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101          355          360          365
103 Ile Glu Arg Glu Ile Asn Ser Val Asn Asp Asn Pro Leu Ile Asp Val
104          370          375          380
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107 385          390          395          400
109 Gly Val Ser Met Asp Asn Thr Arg Leu Ala Ile Ala Ala Ile Gly Lys
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112 Leu Met Phe Ala Gln Phe Ser Glu Leu Val Asn Asp Phe Tyr Asn Asn
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121 Gln Phe Leu Ala Asn Pro Val Thr Asn His Val Gln Ser Ala Glu Gln
122 465          470          475          480
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125          485          490          495
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128          500          505          510
130 Ala Leu Cys Gln Ser Ile Asp Leu Arg His Leu Glu Glu Asn Met Lys
131          515          520          525
133 Ser Thr Val Lys Asn Thr Val Ser Gln Val Ala Lys Lys Val Leu Thr
134          530          535          540
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145 Val Asp His Ala Leu Asn Asn Gly Glu Thr Glu Lys Asn Thr Asn Thr
146           595           600           605
148 Ser Ile Phe Gln Lys Ile Ala Thr Phe Glu Glu Glu Leu Lys Val Leu
149           610           615           620
151 Leu Pro Lys Glu Val Glu Gly Val Arg Ile Ala Tyr Glu Asn Asp Thr
152 625           630           635           640
154 Leu Ser Ile Pro Asn Arg Ile Lys Ala Cys Arg Ser Tyr Pro Leu Tyr
155           645           650           655
157 Arg Phe Val Arg Glu Glu Leu Gly Arg Gly Phe Leu Thr Gly Glu Lys
158           660           665           670
160 Val Thr Ser Pro Gly Glu Glu Phe Asp Arg Val Phe Thr Ala Met Cys
161           675           680           685
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187           35           40           45
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190           50           55           60
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193 65           70           75           80
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196           85           90           95
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199           100          105          110
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204 Gln Lys Glu Leu Ile Arg Phe Leu Asn Ala Gly Ile Phe Gly Asn Gly
205           130          135          140
207 Thr Glu Ser Thr His Thr Leu Pro His Ser Ala Thr Arg Ala Ala Met
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219	Leu	Ser	Tyr	Ile	Ala	Gly	Leu	Leu	Thr	Gly	Arg	Ala	Asn	Ser
220		210					215						220	
222	Val	Gly	Pro	Thr	Gly	Glu	Val	Leu	Asn	Ala	Glu	Lys	Ala	Phe
223	225					230					235			240
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228	Ala	Leu	Val	Asn	Gly	Thr	Ala	Val	Gly	Ser	Gly	Met	Ala	Ser
229			260						265				270	
231	Leu	Phe	Asp	Ala	Asn	Val	Leu	Ala	Leu	Leu	Ser	Glu	Val	Leu
232			275					280					285	
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235		290					295					300		
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238	305				310						315			320
240	Met	Glu	Tyr	Ile	Leu	Asp	Gly	Ser	Asp	Tyr	Val	Lys	Ala	Ala
241				325						330				335
243	Val	His	Glu	Met	Asp	Pro	Leu	Gln	Lys	Pro	Lys	Gln	Asp	Arg
244			340						345				350	
246	Leu	Arg	Thr	Ser	Pro	Gln	Trp	Leu	Gly	Pro	Gln	Ile	Glu	Val
247		355						360					365	
249	Ser	Ser	Thr	Lys	Met	Ile	Glu	Arg	Glu	Ile	Asn	Ser	Val	Asn
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253	385				390						395			400
255	Gln	Gly	Thr	Pro	Ile	Gly	Val	Ser	Met	Asp	Asn	Thr	Arg	Leu
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258	Ala	Ala	Ile	Gly	Lys	Leu	Met	Phe	Ala	Gln	Phe	Ser	Glu	Leu
259			420						425				430	
261	Asp	Phe	Tyr	Asn	Asn	Gly	Leu	Pro	Ser	Asn	Leu	Ser	Gly	Gly
262			435					440					445	
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265		450					455						460	
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268	465				470						475			480
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271				485						490				495
273	Ser	Ala	Arg	Lys	Thr	Ala	Glu	Ser	Val	Glu	Ile	Leu	Lys	Leu
274				500					505					510
276	Thr	Thr	Tyr	Leu	Val	Ala	Leu	Cys	Gln	Ser	Ile	Asp	Leu	Arg
277			515					520					525	
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280		530					535					540		
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285 Phe Cys Glu Lys Asp Leu Leu Arg Val Val Asp Arg Glu Tyr Val Phe
286           565           570           575
288 Ala Tyr Ile Asp Asp Ala Cys Ser Ala Thr Tyr Pro Leu Met Gln Lys
289           580           585           590
291 Leu Arg Gln Val Ile Val Asp His Ala Leu Asn Asn Glu Asn Asp Ala
292           595           600           605
294 Gly Thr Ser Ile Phe Gln Lys Ile Ser Glu Phe Glu Glu Glu Leu Lys
295           610           615           620
297 Ala Val Leu Pro Lys Glu Val Glu Gly Val Arg Ser Ala Tyr Glu Ser
298 625           630           635           640
300 Ser Thr Leu Thr Ile Pro Asn Arg Ile Lys Glu Cys Arg Ser Tyr Pro
301           645           650           655
303 Leu Tyr Arg Phe Val Arg Glu Glu Leu Gly Thr Gly Phe Leu Thr Gly
304           660           665           670
306 Glu Glu Val Thr Ser Pro Gly Glu Glu Phe Asp Lys Val Phe Thr Ala
307           675           680           685
309 Leu Cys Lys Gly His Ile Ile Asp Pro Leu Leu Glu Cys Val Gln Gly
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317 <211> LENGTH: 2442
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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/964,992A

DATE: 07/24/2002
TIME: 14:33:58

Input Set : A:\Uco-1245.app
Output Set: N:\CRF3\07242002\I964992A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:6; N Pos. 6,9
Seq#:7; N Pos. 12,15

VERIFICATION SUMMARY

DATE: 07/24/2002

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TIME: 14:33:58

Input Set : A:\Uco-1245.app

Output Set: N:\CRF3\07242002\I964992A.raw

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L:600 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:613 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:630 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:631 M:259 W: Allowed number of lines exceeded, <223> Other Information: